Connect 4 - Shaping up your portfolio

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Learning objectives

Present
the case for Commercial Property and Global Infrastructure as a diversifying asset in a modern portfolio or investment solution

Explain
the performance of Commercial Property post Brexit vote, the liquidity concerns and the prospects beyond Brexit

Describe
the characteristics and attractions of Global Infrastructure and consider its place as part of a well-diversified portfolio
The shape of things to come!

What’s shaping our views

Commercial property – what shape is it in?

Infrastructure – moving in different circles

M&G, helping you to be ship shape
Not all asset classes were out of shape…

Review of 2018

Asset class performance over 2018

FTSE All Share Index: -9.5%
MSCI ACWI EX US Index: -8.9%
European Corporate Bonds: -1.1%
Cash: 0.2%
FTSE UK Gilts: 0.6%

Getting physical and INTO shape with your portfolios…

A genuinely differentiated risk/return profile

Past performance is not a guide to future performance

**Low or negative correlation with other asset classes**

Source: Morningstar and M&G statistics. 31 January 2019. FTSE 350 Real Estate Index, Index, FTSE All-Share Index, FTSE All-Stocks Gilt Index. Cash return is the 3-month LIBOR (Bank of England) Infrastructure is FTSE Developed Core Infrastructure Index, RETIS; FTSE All-Share REITS Index
Rounding up or down?

**Real Assets**
- Equity
- Property
- Infrastructure

**Growth**

**Diversifying Assets**
- Fixed income
- Commodities
- Alternatives

**Diversification**

*The balance changes over time*
The shape of things to come!

What's shaping our views

Commercial property – what shape is it in?

Infrastructure – moving in different circles

M&G, helping you to be ship shape
The case for bricks & mortar
Diversification and downside protection

9.2% p.a. return for 32 years

Source: MSCI IPD Monthly, December 2018

IPD UK Commercial Property annualised total return composition
A global perspective
Global allocation to property

Weighted average target allocation to real estate, all institutions

<table>
<thead>
<tr>
<th>Year</th>
<th>Target Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>8.9</td>
</tr>
<tr>
<td>2014</td>
<td>9.3</td>
</tr>
<tr>
<td>2015</td>
<td>9.6</td>
</tr>
<tr>
<td>2016</td>
<td>9.9</td>
</tr>
<tr>
<td>2017</td>
<td>10.1</td>
</tr>
<tr>
<td>Expected 2018</td>
<td>10.3</td>
</tr>
</tbody>
</table>

And 1% equates to $700B!

Source: Colliers International, Hodes Weill October 2017
UK and London in good shape
London has greatest activity and cross-border investment

Most active cities

<table>
<thead>
<tr>
<th>Rank YTD 2017</th>
<th>Rank YTD 2018</th>
<th>City</th>
<th>YTD 2018 (US$bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>London</td>
<td>24.7</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>New York</td>
<td>23.6</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>Seoul</td>
<td>17.2</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Paris</td>
<td>16.3</td>
</tr>
<tr>
<td>8</td>
<td>5</td>
<td>Hong Kong</td>
<td>16.2</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>Tokyo</td>
<td>14.7</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>Los Angeles</td>
<td>13.4</td>
</tr>
<tr>
<td>11</td>
<td>8</td>
<td>Shanghai</td>
<td>11.4</td>
</tr>
<tr>
<td>16</td>
<td>9</td>
<td>Chicago</td>
<td>10.1</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>Washington DC</td>
<td>9.2</td>
</tr>
</tbody>
</table>

UK domestic investors still competing with overseas capital

Source: JLL, Q3 2018
UK and London in good shape
London has greatest activity and cross-border investment

10 largest recipient cities of cross-border investment

- London
- New York
- Paris
- Frankfurt
- Hong Kong
- Washington DC
- Los Angeles
- Tokyo
- Munich
- Brussels

YTD 2018
YTD 2017

UK domestic investors still competing with overseas capital

Source: JLL, Q3 2018
Healthy spread protects property from significant upwards pressure on yields

Source: Bloomberg, MSCI/IPD January 2019
From a sales angle

Transaction volumes remain buoyant

Overseas still active, domestic institutions net buyers

UK – the circle of virtue?
Transaction volumes remain buoyant

Source: Property Data, 28 January 2019
Property – the building blocks…
Construction activity below long-term average

![Graph showing completions (million sq ft) for industrial, retail, and offices from 2000 to 2022. The graph includes a forecast line indicating projected activity below the historic average for the years 2000 to 2017.](Image source: By Alex1ruff - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=48367982)
The shapes of Quality Street
Rent rises are broadly supportive

Quality is the sweet spot!

Retail capital values could be in **bad shape**…

Ongoing polarisation

CBRE Property Valuation Capital Growth, Index June 16 = 100
Retail - No longer (square) window shopping?
Meeting consumer expectations

### Retail – back in its box? True value of stores, excluding food & grocery

2023 estimated, all figures are £bn

<table>
<thead>
<tr>
<th>Category</th>
<th>Value (£bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store sales</td>
<td>144.8</td>
</tr>
<tr>
<td>Online not browsed instore</td>
<td>15.5</td>
</tr>
<tr>
<td>Online browsed instore</td>
<td>5.9</td>
</tr>
<tr>
<td>Click &amp; collect</td>
<td>9.2</td>
</tr>
<tr>
<td>Online pureplays</td>
<td>25.8</td>
</tr>
<tr>
<td>Offline remote</td>
<td>1.4</td>
</tr>
</tbody>
</table>

*Online sales need physical presence*

Source: Global Data, April 2018
Retail – It’s all gone pear-shaped??

Debenhams at The Moor, Sheffield

Riverside Retail Park, Northampton

c.£14m
-20.0% in 2018

c.£95m
+0.2% in 2018

Retail portfolio: 64% prime, 23% good secondary and 13% secondary

Source: M&G, December 2018
Industrials - Squaring up to the rest?
Industrials and alternatives trading at a premium to NAV

Offices - Blocks on blocks…
Supply shrinking

Development starts

- Speculative at start
- Pre-let at start

You can’t put square pegs in round holes…
A bit of the ‘other’

% of ‘other’ sector

Other as % of All Property

Leisure  All Resi  Healthcare  Hotels  Other (unaccounted for)  Other as % of all property

‘Other’ sector becoming more important

Source: MSCI Quarterly Universe, as at end December 2018.
Having a ball with predictions…

M&G RE UK commercial property total return forecasts

Summary

Property shaping up

• Property funds offer a secure income
• Physical property remains a great diversifier
• Property fundamentals remain resilient
• Income key driver of returns in the medium term
The shape of things to come!

What’s shaping our views

Commercial property – what shape is it in?

Infrastructure – moving in different circles

M&G, helping you to be ship shape
Everything changes but everything stays the same…

The changing shape of our world

Infrastructure for our fast-changing world
Wheels of change...

A timeless innovation...
Wheels of change…
The Philadelphia Turnpike

Pennsylvania Turnpike revenue in 2018

$1.2 billion + dividend yield

Seriously enduring assets that can generate inflation-beating returns

Moving in different circles - renewable energy
America’s oldest surviving listed infrastructure company

Consolidated Edison revenue in 2018
$12.2 billion + dividend yield of 3.8%

Seriously long-term returns fuelled by consistent dividend growth

Infrastructure demands are growing
Transportation needs spiralling out of control

We are struggling to cope with our growing needs

Infrastructure demands are growing

Renewable energy addressing global issues

Lynchpin of climate change solutions

Tolerable level of warming

Warming at current emissions trajectory

Demand up

Source: M&G, Bank of America Merill Lynch, 2018 (LHS); Bloomberg New Energy Finance, 2016 (RHS)
Infrastructure demands are growing
Renewable energy addressing global issues

What will drive their adoption?
Estimated cost decrease of different renewables to 2040

- Solar: 66%
- Onshore wind: 47%
- Offshore wind: 71%

Costs down

Source: M&G, Bank of America Merill Lynch, 2018 (LHS); Bloomberg New Energy Finance, 2016 (RHS)
Infrastructure gap – suffers from chronic underinvestment

Government spending is at a 70-year low

Source: US Bureau of Economic Analysis, 30 September 2018; American Society of Civil Engineers, 2017 Infrastructure Report Card
Infrastructure gap – a hole load of stats…

Geographic split of investment needs

Emerging markets account for nearly two-thirds of demand

- North America: 20%
- Western Europe: 10%
- China: 34%
- Other EM: 30%

Source: McKinsey, Bridging infrastructure gaps: Has the world made progress? October 2017
Ever increasing circles?
Expanding the universe to capture long-term growth

A stable, dependable foundation.....augmented by growth

Source: M&G, 2018 *Expected annual dividend increase, for illustrative purposes only
Valuations

Economic infrastructure looks particularly attractive

Infrastructure – a diamond in the rough?
Listed infrastructure provides clear risk/return benefits

M&G’s infrastructure universe vs MSCI AC World (10 years)

Increased allocation to listed infrastructure

<table>
<thead>
<tr>
<th>Return %</th>
<th>Risk (RHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>12%</td>
</tr>
<tr>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>20%</td>
<td>8%</td>
</tr>
<tr>
<td>30%</td>
<td>6%</td>
</tr>
<tr>
<td>40%</td>
<td>4%</td>
</tr>
<tr>
<td>50%</td>
<td>2%</td>
</tr>
<tr>
<td>60%</td>
<td>0%</td>
</tr>
<tr>
<td>70%</td>
<td>0%</td>
</tr>
<tr>
<td>80%</td>
<td>0%</td>
</tr>
<tr>
<td>90%</td>
<td>0%</td>
</tr>
<tr>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Past performance is not a guide to future performance

The longer the holding period, the more pronounced the effect

The infrastructure universe is shaping up!

Higher yield vs global equities

Yield: M&G’s infrastructure universe vs MSCI AC World

Past performance is not a guide to future performance

Source: Factset, 30 June 2017. *As at 31 January 2017. **As at 27 October 2017
The infrastructure universe is shaping up!
Lower volatility and drawdown vs global equities

Drawdown (in USD)**

Past performance is not a guide to future performance

Gets back into shape quicker!

More like a square peg in a round hole?
An active approach is essential: infrastructure indices are flawed

<table>
<thead>
<tr>
<th>Infrastructure index</th>
<th>Constituents</th>
<th>Utilities</th>
<th>Energy</th>
<th>Telecom services</th>
<th>Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTSE Core Infrastructure</td>
<td>149</td>
<td>56%</td>
<td>11%</td>
<td>1%</td>
<td>25%</td>
</tr>
<tr>
<td>FTSE Core Infrastructure 50/50</td>
<td>227</td>
<td>48%</td>
<td>11%</td>
<td>1%</td>
<td>32%</td>
</tr>
<tr>
<td>S&amp;P Global Infrastructure</td>
<td>75</td>
<td>39%</td>
<td>18%</td>
<td>0%</td>
<td>43%</td>
</tr>
<tr>
<td>MSCI ACWI Infrastructure</td>
<td>262</td>
<td>41%</td>
<td>9%</td>
<td>42%</td>
<td>4%</td>
</tr>
<tr>
<td>Macquarie Global Infrastructure</td>
<td>241</td>
<td>80%</td>
<td>12%</td>
<td>0%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Highly concentrated with bond-proxy performance

Source: Provider factsheets, 31 August 2017
Tomorrow’s world – the stars of the future
Technology is constantly evolving

Who are going to be the winners and losers?

5G rollout
Magnetic levitation

Infrastructure – we’ve come full circle

Summary

Unique asset class with **compelling characteristics**

**Rising income** backed by structural growth and inflation-protected revenues

Modern and **differentiated approach**

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*A long-term strategy to deliver long-term solutions*
Learning outcomes

**Present**
the case for Commercial Property and Global Infrastructure as a diversifying asset in a modern portfolio or investment solution

**Explain**
the performance of Commercial Property post Brexit vote, the liquidity concerns and the prospects beyond Brexit

**Describe**
the characteristics and attractions of Global Infrastructure and consider its place as part of a well-diversified portfolio
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M&G Property Portfolio

Risks associated with this fund

The value of investments and the income from them will rise and fall. This will cause the fund price, as well as any income paid by the fund, to fall as well as rise. There is no guarantee the fund will achieve its objective, and you may not get back the amount you originally invested.

The fund is valued daily on both an ‘offer’ basis (how much its assets would cost to buy) and a ‘bid’ basis (how much the fund would receive if assets were sold). The difference between the two is known as the ‘spread’, which is currently around 6.25%.

The fund invests mainly in one type of asset. It is therefore more vulnerable to market changes for that specific type of asset. This type of fund can carry a higher risk and can experience bigger price gains and falls when compared to a fund which invests in more types of assets.

If significant numbers of investors withdraw their investments from the fund at the same time, the manager may be forced to dispose of property investments. This may result in less than favourable prices being obtained in the market for those investments.

Property valuations are provided by an independent valuer and are subject to the judgement of the valuer.

Where market conditions make it hard to sell the fund’s investments at a fair price to meet customers’ sale requests, we may temporarily suspend dealing in the fund’s shares.

The fund manager will place transactions, hold investments and place cash on deposit with a range of counterparties (opposite parties). There is a risk that counterparties or tenants of properties may default (fail to pay) on their obligations or become insolvent.

All of the above risks could have an adverse effect on the value of your investment.

For any performance shown, please note that past performance is not a guide to future performance.
Income quality

Tenant mix

Fund quartiles from safest (green) to riskiest (orange)

Source: IPD Iris Report, June 2018 vs MSCI Quarterly Universe
Income quality
Tenant mix

Ranking of weighted risk score

Source: IPD Iris Report, June 2018 vs MSCI Quarterly Universe

<table>
<thead>
<tr>
<th></th>
<th>Fund percentile rank</th>
<th>Q1 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index percentile rank</td>
<td>26.9</td>
<td></td>
</tr>
<tr>
<td>Index weighted average</td>
<td>45.9</td>
<td></td>
</tr>
</tbody>
</table>
Performance
In sterling

<table>
<thead>
<tr>
<th>Performance</th>
<th>1 year %</th>
<th>3 years % pa</th>
<th>5 years % pa</th>
</tr>
</thead>
<tbody>
<tr>
<td>M&amp;G Property Portfolio</td>
<td>3.6</td>
<td>1.0</td>
<td>5.0</td>
</tr>
<tr>
<td>(IA) UK Direct Property Sector</td>
<td>2.6</td>
<td>3.1</td>
<td>5.4</td>
</tr>
</tbody>
</table>

- Price swings distort data
- Peer group influenced by holdings in securities

<table>
<thead>
<tr>
<th>Performance</th>
<th>2019 YTD %</th>
<th>2018 %</th>
<th>2017 %</th>
<th>2016 %</th>
<th>2015 %</th>
<th>2014 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>M&amp;G Property Portfolio</td>
<td>0.1</td>
<td>4.2</td>
<td>6.9</td>
<td>-7.1</td>
<td>8.9</td>
<td>14.4</td>
</tr>
</tbody>
</table>

Past performance is not a guide to future performance

Source: Morningstar, Inc., 31 January 2019, sterling I class units, net income reinvested, price to price

50
M&G Global Listed Infrastructure Fund

Risks associated with this fund
The value of investments and the income from them will rise and fall. This will cause the fund price, as well as any income paid by the fund, to fall as well as rise. There is no guarantee the fund will achieve its objective, and you may not get back the amount you originally invested.
Changes in currency exchange rates will affect the value of your investment.
The fund holds a relatively small number of investments and, as a result, may experience larger price rises and falls than a fund which holds a larger number of investments.
The fund will invest in emerging markets which are generally more sensitive to economic and political factors, and where investments are less easily bought and sold. In exceptional circumstances, the fund may encounter difficulties when selling or collecting income from these investments, which could cause the fund to incur a loss. In extreme circumstances, it could lead to the temporary suspension of dealing in shares in the fund.
Convertibles are subject to the risks associated with both bonds and company shares, and to risks specific to the asset class. Their value may change significantly depending on economic and interest rate conditions, the creditworthiness of the issuer, the performance of the underlying company shares and general financial market conditions. In addition, issuers of convertibles may fail to meet payment obligations and their credit ratings may be downgraded. Convertibles may also be less liquid than the underlying company shares.
Where market conditions make it hard to sell the fund’s investments at a fair price to meet customers’ sale requests, we may temporarily suspend dealing in the fund’s shares.
Some transactions the fund makes, such as placing cash on deposit, require the use of other financial institutions (for example, banks). If one of these institutions defaults on their obligations or becomes insolvent, the fund may incur a loss.
For any performance shown, please note that past performance is not a guide to future performance.

It is also important to note that
The fund invests mainly in company shares and is therefore likely to experience larger price fluctuations than funds that invest in bonds and/or cash.
**Calendar year performance in sterling**

<table>
<thead>
<tr>
<th>M&amp;G Global Listed Infrastructure Fund</th>
<th>2018 %</th>
<th>2017 %</th>
<th>2016 %</th>
<th>2015 %</th>
<th>2014 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>M&amp;G Global Listed Infrastructure Fund</td>
<td>1.1</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>MSCI ACWI Index</td>
<td>-3.3</td>
<td>13.8</td>
<td>29.4</td>
<td>3.8</td>
<td>11.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3 months %</th>
<th>6 months %</th>
<th>YTD 2019 %</th>
<th>1 year %</th>
</tr>
</thead>
<tbody>
<tr>
<td>M&amp;G Global Listed Infrastructure Fund</td>
<td>7.9</td>
<td>4.7</td>
<td>10.1</td>
</tr>
<tr>
<td>MSCI ACWI Index</td>
<td>4.6</td>
<td>-2.9</td>
<td>8.2</td>
</tr>
</tbody>
</table>

Past performance is not a guide to future performance

**Number 1 in the sector over 1 year**

Source: Morningstar Inc., UK database, 22 February 2019, sterling I class shares, income reinvested, price to price